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EXAMINER

FARROKH, HASHEM

ART UNIT PAPER NUMBER

2187

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/706,742

Applicant(s)

VAN RIETSCHOTE ET AL.

Examiner

Hashem Farrokh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 and 30-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-9, 13-19, 23-27, 30-31, 33 and 35-38 is/are rejected.
- 7) ☒ Claim(s) 28, 32 and 34 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 9/18/06
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

The instant application having application No. 10/706,742 has a total of 37 claims pending in the application; claims 1, 3, 10, 17, 24, 30, and 35-36 have been amended; claim 29 has been canceled; no claims have been added.

INFORMATION CONCERNING CLAIMS:

The indicated allowability of the some of the claims indicated in previous Office Action is withdrawn in view of the newly discovered reference(s). Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-23 are rejected under 35 U.S.C. 101 because:

1. Claims 1-23 are not limited to tangible embodiments. In view of applicants' disclosure, specification page 24, lines 7-13, the medium is not limited to tangible embodiments, instead being defined as including both tangible embodiments (e.g., storage media such as magnetic or optical media, e.g., disk, CD-ROM...) and intangible embodiments (e.g., transmission media or signals...). As such, the claims are not limited to statutory subject matter and are therefore non-statutory.

Applicant can overcome the above 101 rejection by amending the claims to replace "computer accessible medium" with "computer storage accessible medium"

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-2, 7, 13-16, 24-25, and 30-31 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Publication No. 2003/0142561 A1 to Mason, JR et al. (hereinafter Mason).

2. In regard to claim 1 Mason teaches:

“A computer accessible medium comprising instructions which (e.g., elements 12 and 38 in Fig. 2), when executed:” (e.g., paragraph 32 in page 3).

“(a) check a first storage from which a computer system is configured to boot (e.g., paragraphs 39-40 in pages 3 to 4; Fig. 3) for a block identified in a read request generated on the computer system (e.g., paragraph 45 in page 4), wherein the first storage is non-volatile (e.g., paragraph 34 in page 3; Non-volatile Cache Memory 38 in Fig. 2), and wherein the block is included within an image of a set of software resources to be provisioned on the computer system;” (e.g., see Claims 9-10 in page 5). For example the non-volatile cache memory used for caching data including operating system and application programs for booting.

"(b) if the block is stored in the first storage (e.g., **Cache Memory 38 in Fig. 2**), supply the block from the first storage in response to the read request; and" (e.g., **paragraph 29 in page 3**).

"(c) if the block is not stored in the first storage: fetch at least the block from an image repository system that stores the image;" (e.g., **see paragraph 45 in page 4**). *For example if the data is not in cache or first storage, the data is fetched from disk or image repository system.*

"store the block in the first storage;" (e.g., **see paragraph 34 in page 3; paragraph 45 in page 4**).

"supply the block in response to the read request." (e.g., **see paragraph 46 in page 4**).

3. *In regard to claim 2 Mason teaches:*

"wherein the read request is generated in response to the computer system executing one or more of the set of software resources." (e.g., **see paragraph 19 in page 2**).

4. *In regard to claim 7 Mason teaches:*

"wherein the instructions, when executed, maintain a map identifying which blocks of the image are stored in the first storage, and wherein checking the first storage for the block comprises checking the map." (e.g., **see paragraph 32 in page 3; paragraph 39 in page 4**). *Mason teaches that the meta data stored in cache include flags. Flags are checked to determine whether the boot data is stored in cache. The meta data represents the map recited in the claim.*

5. *In regard to claim 13 mason teaches:*

"wherein the instructions comprise a device driver (**e.g., paragraph 15 in page 2**), and wherein the computer accessible medium is further comprising a program comprising second instructions which, when executed:" (**e.g., paragraph 27 in page 3**). *For example the boot optimizer represents a device driver recited in the claim. The embedded program taught by Mason comprises a plurality of instructions*

"receive one or more additional blocks from the image repository system (**e.g., paragraph 16 in page 2**), wherein the one or more additional blocks are received independent of read requests generated in the computer system and received by the device driver;" (**e.g., paragraph 19 in page 2**). *For example the boot optimizer runs independent of host initial request and stores boot data in cache.*

"store the one or more additional blocks in the first storage;" (**e.g., paragraph 19 in page 2**).

"update the map to indicate that the one or more additional blocks are stored in the first storage." (**e.g., paragraph 39 in page 3**). *For example a flag is being set to indicate that the boot data is in the cache.*

6. *In regard to claim 14 mason teaches:*

"wherein the second instructions, when executed, request the one or more additional blocks from the image repository system independent of read requests generated in the computer system and received by the device driver." (**e.g., paragraph 19 in page 2**). *For example the boot optimizer when executed stores the operating system and application program into cache.*

7. *In regard to claim 15 mason teaches:*

"wherein the second instructions terminate execution in response to detecting that each block within the image is stored in the first storage." (e.g., paragraph 47 in page 4; Fig. 3). *Mason teaches the detection and completion or termination of boot initialization process.*

8. *In regard to claim 16 mason teaches:*

"wherein the first storage comprises a local storage of the computer system." (e.g., see Cache Memory 38 in Fig. 2). The Cache Memory 38 is a local storage of computer system.

9. *In regard to claim 24 Mason teaches:*

"A method for provisioning a computer system with a set of software resources (e.g., see Fig. 3), the method comprising:"

"initiating execution of the set of software resources on the computer system prior to storing at least some blocks comprising the set of software resources to a first storage from which the computer system is configured to boot (e.g., see paragraph 52 in pages 4-5), wherein the first storage is non-volatile" (e.g., paragraph 34 in page 3; Non-volatile Cache Memory 38 in Fig. 2).

"the computer system generating a read request (e.g., see abstract; paragraph 5 in page 1) for a first block of the blocks comprising the set of software resources;" (e.g., see paragraph 19 in page 2).

"if the first block is stored in the first storage (e.g., see paragraph 45 in page 4), supplying the first block from the first storage;" (e.g., paragraph 29 in page 3).

"if the first block is not stored in the first storage: fetching the first block from an image repository system that stores an image of the set of software resources;" (e.g., see **column 9 lines 13-17**).

"storing the first block in the first storage;" (e.g., see **paragraph 34 in page 3; paragraph 45 in page 4**).

"supplying the first block in response to the read request." (e.g., see **paragraph 46 in page 4**).

10. *In regard to claim 25 Mason teaches:*

"wherein initiating execution of the set of software resources comprises responding to a remote boot request from the computer system with a plurality of instructions which, when executed, initiate the execution." (e.g., see **paragraph 19 in page 2**).

11. *In regard to claim 30 Mason teaches:*

"An apparatus (e.g., **Fig. 2**) comprising:"

"an image repository system configured to store an image of a set of software resources;" (e.g., see **paragraphs 16 and 19 in page 2; Claim 9; Fig. 2**). *For example operating system or application program, taught by Mason, are software resources stored in Cache 38 and/or Disk 12.*

"a computer system (e.g., **elements 10 and 20 in Fig. 2**), wherein the computer system is configured to transmit a remote boot request in response to booting;" (e.g., see **paragraph 45 in page 4**). *For example the controller 20, in response to booting, checks the Cache Memory 38 if the boot data not found in the cache, a request for boot data is transmitted to disk 12.*

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"wherein the image repository system is coupled to receive the remote boot request,"
(e.g., see paragraph 34 in page 3; Fig. 2). *The disk 12 is coupled to the controller 20 will receive the request for data from the controller.*

"and wherein the image repository system is configured to detect that the computer system is to be provisioned with the set of software resources **(e.g., see paragraph 34 in page 3; Fig. 2)**, and wherein the image repository system is configured to respond to the remote boot request with a program which **(e.g., see paragraph 29 in page 3)**, when executed by the computer system **(e.g., see paragraph 32 in page 3)**, initiates execution of the set of software resources prior to at least some blocks in the image being copied to the computer system **(e.g., see paragraph 31 in page 3)**, and wherein the computer system includes a first storage that is to store the image **(e.g., Cache memory 38)**, and wherein the set of software resources includes a device driver for the first storage which **(e.g., see paragraph 15 in page 2)**, when executed in response to a read request generated responsive to executing the set of software resources **(e.g., see abstract)**, is configured to check the first storage for a first block identified by the read request, and wherein the device driver is configured to supply the first block from the first storage if the first block is stored in the first storage." **(e.g., see paragraph 29 in page 3; Fig. 3).** *The CPU within the controller executes the boot optimizer to access the cache memory to retrieve boot data or send a request for boot data to disk if not found in the cache.*

12. *In regard to claim 31 Mason teaches:*

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"wherein the device driver is configured to fetch the first block from the image repository system if the first block is not stored in the first storage (e.g., see paragraph 45 in page 4), and wherein the device driver is configured to store the first block in the first storage (e.g., see paragraph 34 in page 3; paragraph 45 in page 4), and wherein the device driver is configured to supply the first block in response to the read request." (e.g., paragraph 45 in page 4).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-4, 6, 17, 18-19, 23, 26-27, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mason in view of U.S. Paten No. 6,854,115 B1 to Traversat et al. (hereinafter Traversat).

13. *In regard to claim 3 Mason teaches:*

"A computer accessible medium comprising instructions which (e.g., elements 12 and 38 in Fig. 2), when executed:" (e.g., paragraph 32 in page 3).

"trap reads ... an image of a set of software resources to be provisioned on the computer system;" (e.g., see abstract; paragraphs 39-40 in pages 3 to 4; Fig. 3).

"for each read:" (e.g., paragraph 16 in page 2).

“(a) check a first storage from which the computer system is configured to boot for a block identified in the read (e.g., paragraphs 39-40 in pages 3 to 4; Fig. 3), wherein the block is included within the image of the set of software resources;” (e.g., see **Claims 9-10 in page 5**).

“(b) if the block is stored in the first storage (e.g., **Cache Memory 38 in Fig. 2**), supply the block from the first storage in response to the read; and” (e.g., **paragraph 29 in page 3**).

“(c) if the block is not stored in the first storage: fetch at least the block from an image repository system that stores the image;” (e.g., see **paragraph 45 in page 4**). *For example if the data is not in cache or first storage, the data is fetched from disk or image repository system.*

“store the block in the first storage;” (e.g., see **paragraph 34 in page 3; paragraph 45 in page 4**).

“supply the block in response to the read.” (e.g., see **paragraph 46 in page 4**).

However, Mason does not expressly teach a virtual machine or: “establish a virtual machine on a computer system;”

*Traversat teaches: “establish a virtual machine on a computer system;” (e.g., see **column 5, lines 1-2**) for starting or establishing a virtual machine in a computer system.*

Disclosures by Mason and Traversat are analogous because both references teach system and methods of managing memory in data processing or computer systems.

At the time of invention it would have been obvious to a person of ordinary skill in art to modify the computer system taught by Mason to include the virtual machine taught by Traversat.

The motivation for combination as taught by column 1, lines 42-44 of Traversat are to provide the capability to run one binary file on the virtual machine on the one or more computer platforms.

Therefore, it would have been obvious to combine disclosures by Traversat with Mason to obtain the invention as specified in the claim.

14. *In regard to claim 4 Traversat teaches:*

"wherein the instructions, when executed: trap writes by the virtual machine the image;"
(e.g., see column 5, lines 37-52).

"and for each write, store the block or blocks in the first storage and track the blocks as modified with respect to the image on the image repository system." (e.g., see column 21, lines 6-8).

15. *In regard to claim 6 Mason teaches:*

"second instructions which, when executed in response to a remote boot request from the computer system, transmit a program comprising the instructions to the computer system, the computer system booting using the program." (e.g., Claims 9-10 in page 5). For example operating system program or application program include plurality of instructions. The computer system inherently uses instructions or code to boot the programs.

16. *In regard to claim 17 Mason teaches:*

"A computer accessible medium (**e.g., elements 12 and 38 in Fig. 2**) comprising"
"store a block identified in a write request generated within a computer system to a first storage from which the computer system is configured to boot (**e.g., see paragraph 19 in page 2; paragraph 40 in page 4**), the block included in an image of a set of software resources that are provisioned on the computer system (**e.g., see paragraph 52 in page 4 to 5**), wherein the first storage is non-volatile" (**e.g., paragraph 34 in page 3; Non-volatile Cache Memory 38 in Fig. 2**). *However, Mason does not expressly teach:*
"record that the block is modified with respect to the image stored in an image repository system."

Traversat teaches: "record that the block is modified with respect to the image stored in an image repository system." (**e.g., see column 5 lines 47-55; column 9, lines 62-67 to column 10 lines 1-10 Fig. 11a**) *for setting the dirty bits to indicate that data modified or updated. The motivation for combining is based on the same rationale given for rejection of claim 3.*

17. *In regard to claim 18 Traversat teaches:*

"where the instruction that record that the block is modified, when executed, update a map identifying blocks within the image that are stored in the first storage to indicate that the block is stored in the first storage and is modified with respect to the image stored in an image repository system." (**e.g., see column 32, lines 49-51 and 61-62**).

18. *In regard to claim 19 Traversat teaches:*

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“wherein the instructions, when executed, transmit the block to the image repository system.” (e.g., see column 32, lines 49-51 and 64-67). *For example flushing will move the dirty blocks or pages to persistent memory*

19. *In regard to claim 23 Mason teaches:*

“wherein the first storage comprises a local storage of the computer system.” (e.g., see **Cache Memory 38 in Fig. 2**).

20. *In regard to claim 26 Mason teaches:*

“trapping the read request by the virtual machine to the first storage.” (e.g., see **abstract; paragraphs 39-40 in pages 3 to 4; Fig. 3**).

“... initiating the execution of the set of software resources, ... generating the read request;” (e.g., **paragraph 45 in page 4**). However, Mason does not expressly teach a virtual machine or: “establish a virtual machine on a computer system;”

Traversat teaches: “establish a virtual machine on a computer system;” (e.g., see column 5, lines 1-2) for starting or establishing a virtual machine in a computer system. The motivation for combining is based on the same rational given for rejection of claim 3.

21. *In regard to claim 27 Mason teaches:*

“trapping a write request ...;” (e.g., see **paragraph 5 in page 1; paragraph 15 in page 2**). *Mason teaches caching which detect read or write request (e.g., trapping a write request) and write data to cache and mass storage device(s). However, Mason does not expressly teach: “...virtual machine; storing a block or blocks from the write request*

in the first storage and tracking the block or blocks as modified with respect to the image on the image repository system."

Traversat teaches: "...virtual machine;" (e.g., see column 5, lines 1-2).

"storing a block or blocks from the write request in the first storage and tracking the block or blocks as modified with respect to the image on the image repository system."

(e.g., see column 5 lines 47-55; column 9, lines 62-67 to column 10 lines 1-10 Fig. 2) for tracking the updates and flushing the dirty or modified cache lines from in-memory heap cache to persistent store. The motivation for combining is based on the same rational given in rejection of claim 3.

22. *In regard to claim 33 Mason teaches:*

"wherein the device driver, in response to a write request generate responsive to executing the set of software resources, is configured to store a second block identified by the write request in the first storage," (e.g., see paragraph 5 in page 1; paragraph 15 in page 2). *Mason teaches caching which detect read or write request (e.g., trapping a write request) and write data to cache and mass storage device(s). However, Mason does not expressly teach:*

Traversat teaches: "wherein the device driver is configured to track which blocks in the first storage are modified with respect to the image on the image repository system." (e.g., see column 5 lines 47-55; column 9, lines 62-67 to column 10 lines 1-10 Fig. 2) for tracking the updates and flushing the dirty or modified cache lines from in-memory heap cache to persistent store. The motivation for combining is based on the same rational given in rejection of claim 3.

Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mason in view of U.S. Patent No. 6,754,781 B2 to Chauvel et al. (hereinafter Chauvel).

23. *In regard to claim 8 Mason teaches all limitations recited in claim 7 but does not expressly teach: "wherein the instructions, when executed, update the map to indicate that the block is stored in the first storage in response to fetching the block from the image repository system and storing the block in the first storage."*

Chauvel teaches: "wherein the instructions, when executed, update the map to indicate that the block is stored in the first storage in response to fetching the block from the image repository system and storing the block in the first storage." (e.g., see column 21, lines 18-20) for setting a dirty bit to indicate an update to cache data.

Disclosures by Mason and Chauvel are analogous because both references teach system and methods of managing memory in data processing or computer systems.

At the time of invention it would have been obvious to a person of ordinary skill in art to modify the caching method of accessing data taught by Mason to include the cache with DMA and dirty bits taught by Chauvel.

The motivation for combination as taught by column 20, lines 58-59 of Chauvel are to reduce cost.

Therefore, it would have been obvious to combine disclosures by Chauvel with Mason to obtain the invention as specified in the claim.

24. *In regard to claim 9 Chauvel teaches:*

"wherein the instructions, when executed in response to a write request, store a second block supplied in the write request in the first storage and update the map to indicate that the second block is stored in the first storage and is modified with respect to the image in the image repository system." *(e.g., see column 2, lines 25-37) for setting (e.g., updating) the dirty bits to indicates the cache line data segments or blocks are updated in the cache. The motivation for combining is based on the same rational given for rejection of claim 8.*

Claims 35-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Publication No. 2004/0071549 to Tross et al. (hereinafter Tross) in view of Mason.

25. *In regard to claim 35 Tross teaches:*

"An apparatus **(e.g., see Fig. 1)** comprising:"

"an image repository computer system **(e.g., Storage Node B 24 in Fig. 1)** configured to store ...;" **(e.g., see paragraph 38 in page 3; element 24 in Fig. 1).**

"a computer system coupled to communicate with the image repository computer system **(e.g., Storage Node A 22 in Fig. 1)**, wherein the computer system is configured to execute the set of software resources **(e.g., see paragraph 37 in page 3)**, and wherein the computer system is configured to track which blocks in a first storage ...which correspond to the image are updated with respect to the image stored on the image repository computer system **(e.g., see paragraph 42 in 4)**, the updates generated by the computer system during execution of the set of software

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resources;" (e.g., see **Claim 41 in page 8**). Tross teaches two storage nodes, a bitmap in each node identifies that the tracks or blocks of data that are different between the two nodes. The bitmap is checked to determine the data that has changed or modified in cache 32 of Storage Node A or first storage relative to data stored in Storage Node B 24 or image repository computer system.

"wherein a snapshot of the image as updated by the computer system is generated by transmitting the modified blocks from the computer system to the image repository computer system and not transmitting unmodified blocks." (e.g., see **paragraph 45 in 4; Fig. 4**). For example bitmap checked to determine the track(s) or data blocks written (e.g., modified or updated) in the Cache Memory 32. The updated data is copied to the Storage Node B which represents image repository computer system recited in the claim. However, Tross does not expressly teach data is: "...a set of software resources... and computer system is configured to boot..."

Mason teaches: "...a set of software resources... and computer system is configured to boot..." (e.g., see **paragraph 16 in 2; paragraph 52 in pages 4 to 5; Fig. 3**) for booting the computer with data including software program.

Disclosures by Tross and Mason are analogous because both references teach system and methods of managing memory in data processing systems.

At the time of invention it would have been obvious to a person of ordinary skill in art to modify the method of storing data taught by Tross to include the booting the software resources taught by Mason.

The motivation for combination as taught by paragraph 52, pages 4 to 5 of Mason is to provide capability of rapidly booting the operating system data and application program data during the power-on or other boot sequence.

Therefore, it would have been obvious to combine disclosures by Mason with Tross to obtain the invention as specified in the claim.

26. *In regard to claim 36 Tross teaches:*

"wherein the image repository computer system is configured to transmit an acknowledgement to the computer system in response to receiving the modified blocks." (e.g., see abstract).

27. *In regard to claim 37 Tross teaches:*

"wherein the computer system is configured to indicate that the modified blocks are not modified responsive to the acknowledgement." (e.g., see paragraph 42 in 4).

28. *In regard to claim 38 Tross teaches:*

"wherein the first storage comprises a local storage of the computer system." (e.g., see paragraph 61 in 6; element 32 in Fig. 1).

ALLOWABLE SUBJECT MATTER

Claims 28, 32, and 34 are objected to as being dependent upon rejected based claims, but would be allowable if rewritten in correct and independent form including all of the limitations of the base claim and any intervening claims.

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1. *The primary reason for allowance of claim 28 in instant application is the combination with the inclusion of the following limitations: detecting that a device driver for the first storage within the set of software resources has been initialized; terminating the virtual machine responsive to the detecting.*
2. *The primary reason for allowance of claim 32 in instant application is the combination with the inclusion of the following limitations: wherein the program is configured to establish a virtual machine to execute the set of software resources until the device driver is initialized, and wherein the virtual machine is terminated responsive to the device driver being initialized.*
3. *The primary reason for allowance of claim 34 in instant application is the combination with the inclusion of the following limitations: wherein the image repository system is configured to generate a snapshot image of the set of software resources by requesting the modified blocks from the computer system, and wherein the computer system is configure to transmit the modified blocks to the image repository system in response to the request, and wherein the image repository system is configured to transmit an acknowledgement responsive to receiving the modified blocks, and wherein the computer system is configured to indicate that the blocks are not modified with respect to the image on the image repository system responsive to the acknowledgement.*

: IMPORTANT NOTE :

*If the applicant should choose to rewrite the independent claims to include the limitations recited in either one of the claims, the applicant is encouraged to **amend the title of the invention** such that it is descriptive of the invention as claimed as required by sec. 606.01 of the **MPEP**. Furthermore, the **summary of invention** and the **abstract** should be amended to bring them into harmony with the allowed claims as required by paragraph 2 of **sec. 1302.01** of the **MPEP**.*

*As allowable subject matter has been indicated, applicant's response must either comply with all formal requirements or specifically traverse each requirement not complied with. See **37 C.F.R. § 1.111(b)** and **§ 707.07(a)** of the **M.P.E.P.***

Response to Remarks

The Applicant argument in regard to prior art reference (US 6,754,781 to Chauvel et al.) is persuasive. This action uses additional prior art references to overcome the applicant argument. The Applicant argument in regard to rejection of claims 1-23 under 35 USC § 101 rejections is not persuasive. As stated in previous Office Action and repeated in this Office Action the computer readable media described in the instant specification readable media may include storage media as well as media accessible via transmission media. The media accessible via transmission media may or may not be storage media. According, in regard to 101 rejections the Examiner maintain his position.

Conclusion


*Any inquiry concerning this communication should be directed to Hashem Farrokh whose telephone number is (571) 272-4193. The examiner can normally be reached Monday-Friday from **8:00 AM to 5:00 PM**.*

If attempt to reach the above noted Examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Donald A Sparks, can be reached on (571) 272-4201.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published application may be obtained from either private PAIR or Public PAIR. Status information for unpublished application is available through Private PAIR only. For more information about PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBS) at 866-217-9197 (toll-free).


HF

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Brian R. Paugh
Primary Examiner
11/27/06